

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A semiconductor structure comprising:

an active layer island of a semiconductor material, said active layer island including a plurality of sidewalls and a strained region;
a substrate handle wafer; and
an insulating layer disposed between said active layer island and said substrate handle wafer, said insulating layer containing a thickened region underlying said strained region, said insulating layer electrically isolating said island of said semiconductor material from said handle wafer, and said thickened region transferring tensile stress to said strained region.

2. (Currently Amended) The semiconductor structure of claim 1 wherein said insulating layer is a buried oxide layer and said active layer island is silicon.

3. (Currently Amended) The semiconductor structure of claim 1 further comprising:

a source defined in said active layer island;
a drain defined in said active layer island; and
a channel defined in a portion of said active layer island between said source and said drain, said channel disposed at least partially in said strained region of said active layer island.

4. (Currently Amended) The semiconductor structure of claim 3 further comprising:
a gate electrode electrically isolated from said portion of said active layer island defining said channel.
5. (Original) The semiconductor structure of claim 4 wherein said strained region divides said gate electrode.
6. (Original) The semiconductor structure of claim 4 wherein said gate electrode generally overlies said channel.
7. (Currently Amended) The semiconductor structure of claim 1 further comprising:
a semiconductor device fabricated using said active layer island.
8. (Currently Amended) The semiconductor structure of claim 1 wherein said active layer island is silicon and said thickened region of said insulating layer is formed by oxidation of said active layer island.
9. (Original) The semiconductor structure of claim 9 wherein said insulating layer is silicon dioxide.
10. (Currently Amended) The semiconductor structure of claim 9 wherein said substrate handle wafer is silicon and said thickened region is formed by oxidation of said substrate handle wafer.
11. (Original) The semiconductor structure of claim 1 wherein said tensile stress is effective to enhance carrier mobility within said strained region.
12. (Original) The semiconductor structure of claim 1 wherein a thickness of said thickened region is increased by an increment in the range of about 5 nanometers to about 10 nanometers.

13. (Original) The semiconductor structure of claim 1 wherein said thickened region of said insulating layer has a thickness greater than that of surrounding regions of said insulating layer flanking said thickened region.

14. (Currently Amended) The semiconductor structure of claim 1 further comprising:
first and second anchors flanking said strained region, said first and second anchors effective for limiting relaxation of said strained region of said ~~active layer island~~.

15. (Currently Amended) The semiconductor structure of claim 16 wherein said first and second anchors comprise adjacent regions of said ~~active layer island~~ flanking said strained region.

16-34. (Cancelled)